Incorporating the Benefits of Transit-Oriented Development to Provide Access to Fresh and Healthy Food

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Contents

i Acknowledgments

ii Introduction

7 Background

17 Analysis

24 Areas of Opportunity

29 Recommendations

35 Future Course of Action

38 Conclusion

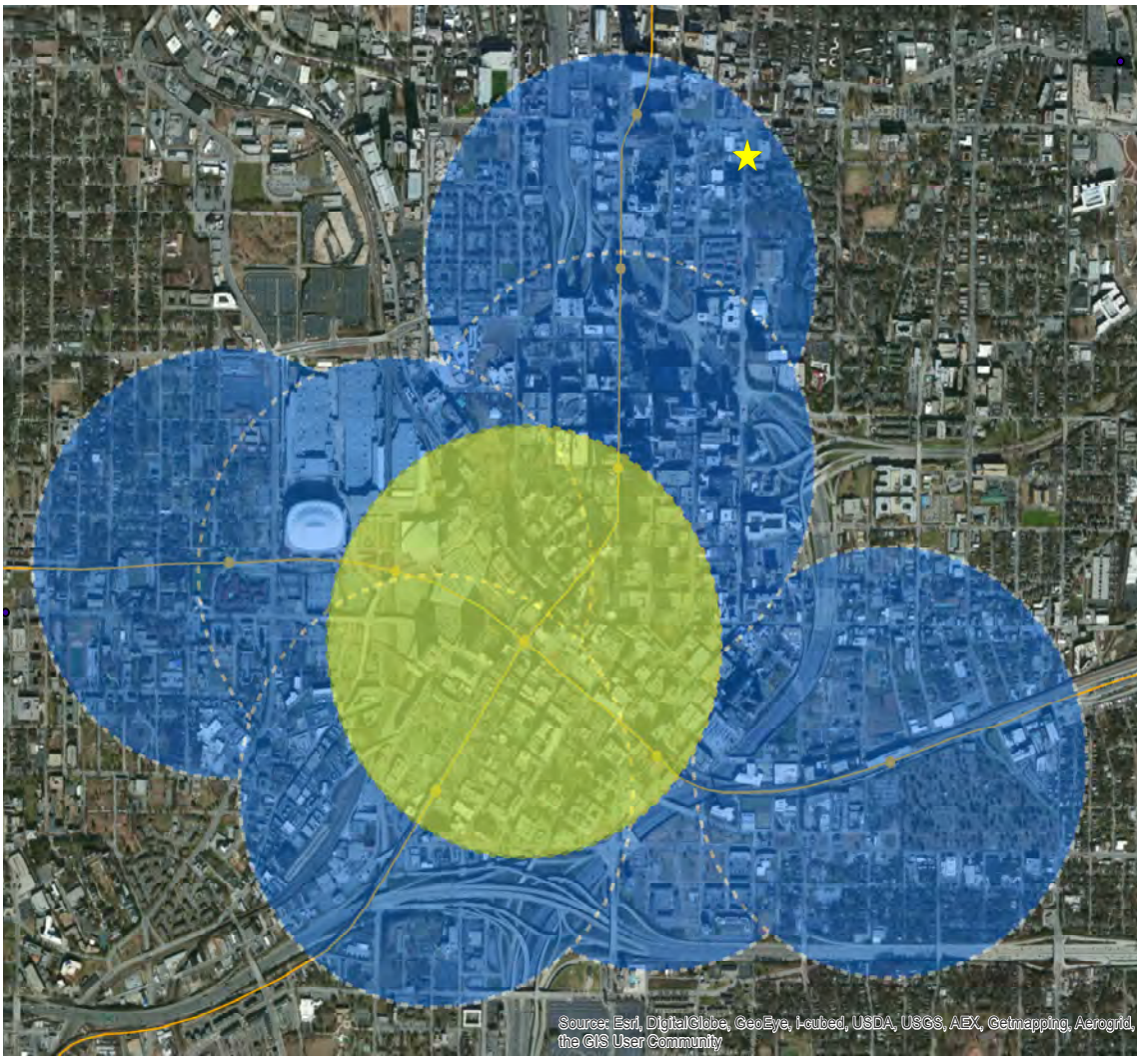
40 References

41 Appendix

Introduction

Abstract

This report investigates how the lack of access to healthy food affects people with low to moderate incomes and examines ways that increasing access to healthy food can be incorporated into the existing benefits of transit-oriented development (TOD). This research indicates that TOD, and public transit more specifically, provides many benefits, but does not directly provide access to healthy food. Achieving access to healthy foods is contingent upon successful incorporation with TOD. Pedestrian-friendly, mixed-use communities provide relief from automobile-dependent lifestyles by increasing access to transit for visitors, residents and workers, enabling them to drive their cars less and ride transit more[1]. TOD provides people with the option to choose where they live, work, and socialize with maximum access and minimum effort. The most successful TOD transit stations integrate seamlessly into the community[1] creating mobility options for those who live within a half-mile buffer of transit station locations, thus creating "activity nodes." In activity nodes people experience many benefits including reduced traffic and reduced



What is TOD?: This map illustrates the area associated with Transit-oriented development; this area is demarcated using a half-mile buffer, because it represents the distance pedestrians are willing to walk to access public transportation. Locating public transit near commercial hubs and affordable housing can potentially decrease dependency on automobiles and increase the use of other modes of transportation including walking, biking, trains, and subways. At the Five Points Stations, eight half-mile buffers exist, however only grocery store is located in this area to serve the needs of the residents in this area, thus creating a food desert.

vehicle miles traveled (VMT), which reduces air and water pollution; these effects also lead to asthma and environmental mutation/defects, respectively. Residents also experience increased safety via TOD design guidelines, which reduces the likelihood of walking in dimly lit streets. TOD can also increases ridership and bolster households' disposable income. Other key benefits of TOD include decreasing infrastructure costs, encouraging economic development, and contributing to more affordable housing. Finally, residents living in with a half-mile of transit stations are more likely to use "active" modes of transportation, including walking to bus and rail stations, which can decrease the prevalence of obesity and heart disease[2]. Research shows that regular physical activity in conjunction with a healthy diet provides substantial benefit in reducing morbidity and mortality[2]. The benefits of TOD increase physical activity and lower pollution; however, these benefits fail to alleviate the barriers between residents and access to healthy food. Incorporating TOD with access to healthy food can help mitigate the prevalence of chronic disease and reduce transportation barriers to access fresh foods. Therefore, for the purpose of this research, a half-mile buffer was used to demarcate the area defined as TOD. Research indicates that residents living within half-mile buffer are more likely to depend on public transit.

Several jurisdictions have researched and compiled best practices that have resulted in recommendations like re-locating markets that sell fresh food next to transit stops, increasing bus services to provide public transportation to stores, and adopting policies and zoning regulations that promote healthy alternatives like community gardens and farmers' markets. Using these best practices and other innovative ideas, this document attempts to identify opportunities to mitigate the effects that a lack of resources has on the vulnerable population within the metro Atlanta region. Several key aspects are considered to ensure that a plan is implemented with minimal setbacks. This report culminates in policy recommendations and design guidelines for stakeholders to successfully mitigate the existence of barriers to healthy food access.

Problem Statement

How can increased access to healthy food be incorporated into the existing benefits of TOD?

- What are the existing benefits of TOD?
- Who are the vulnerable populations that do not have access to healthy food?
- What are some proven best practices that provide access to healthy food for vulnerable populations?
- What are current methods and practices used to increase access to healthy foods around TODs?
- What design guidelines and policy recommendations are best suited to resolve the issue of food access in metro Atlanta around TODs?

Atlanta's Claim to TOD: The Atlanta Streetcar (Top) and the Beltline (Bottom) are examples of TOD in the region. The Beltline connects 45 neighborboods and provides incentives for businesses to locate along its this multi-use trail. In addition to connectivity, these projects provide resources to residents with low to moderate incomes. These resources include job training and employment opportunities, affordable housing, and potentially access to fresh and healthy food. Strategically placing healthy food options near transit can increase awareness and access for residents, thus decreasing food insecurity.

Methodology

The methodology used for this analysis began with identifying the benefits of TOD. After identifying the benefits it was clear that TOD does not provide access to healthy food, a key opportunity. The next step was to figure out who would benefit from access to healthy food. As identified by the Atlanta Regional Commission (ARC), the vulnerable populations were identified with the use of an index that identifies Equitable Target Areas (ETA). These areas suffer a variety of injustices including economic, political, or social injustices, making them more susceptible to food insecurity. These variables assessed in this document include:

- Elderly population
- Low Educational Attainment
- Minorities
- High Median Housing Values, and
- Poverty.

After identifying the vulnerable population, opportunities to incorporate the benefits of TOD to provide access healthy food were identified as part of a report compiled by the Bleakly Advisory Group. This research was used to identify available land suitable for development near transit. This land is located within a half-mile of two transit stations in ETA areas. After identifying land suitable for development, a set of policies, ordinances, and best practices was gathered from other jurisdictions to help circumvent barriers and obstacles that will be faced. This research culminates in a document that provides areas of opportunity, best practices, and policies and ordinances needed to adopt a plan to incorporate the benefits of TOD to provide access to healthy food.

Minorities Play A Major Role: The elderly (left) and minority populations (right) carry a high risk of food insecurity due to a lack of disposable income. Food insecurity inhibits the ability to purchase healthier foods as opposed to cheaper, unhealthy alternatives. (Generally Unbalanced Cropping and Color Included)

Background

Nearly 50 million Americans, more than 16 percent of the population, are struggling to make ends meet[3], as indicated by their place below the national poverty rate. However, this statistic gives no insight to how this percentage relates to food access. Until recently, the food access phenomenon has not garnered much media attention, but in recent years the lack of access to healthy food and its effects on America as a whole has been magnified. Often seen as a problem only affecting the impoverished or immigrants that have struggled to adjust to life in the U.S., food access is now affecting the family next door.

"The big meals you see on the television are make-believe. Every day I feel guilty if I eat three bites of food in the whole day, because I feel like I am taking food away from my daughter."

This is the story one mother, living in Tillamook, Oregon, tells her daughter so that she does not feel guilty about eating food that could potentially feed her child. Another woman living Silverton, Oregon refutes the claim that food access is a problem that affects only the poor minority.

"There are myths and stereotypes about people who aren't trying, or working, or doing their share. But many of us are working twice as hard. When we hear that someone is hurting, many of us will give what little we have to help[4]."

This story is real and very different from the specious myths often associated with poverty and food access. Millions more Americans are struggling to survive in a very tough economy, the prognosis remains bleak barring intervention from stakeholders including federal, state, and local government, policyholders, and members of the community with a solid plan that can ameliorate inequity surrounding food access.

Transit-oriented development (TOD), is another movement that has recently garnered a substantial amount of media attention. This momentum can prove beneficial to incorporating the benefits of TOD to improve food access. The Pennsylvania Fresh Food Financing Initiative, a state-wide public-private effort, has received accolades for its ability to provide access to healthy food to the underserved. It is credited with the development of 78 supermarkets and other fresh food outlets in underserved urban and rural areas, and also demonstrates the positive impacts of healthy food retailing[5]. The effort in Pennsylvania epitomizes the benefits that can be redeemed by capitalizing on initiatives that provide access to healthy food in cities that demonstrate an understanding of TOD and fresh food principles. This approach can allay some of the obstacles that prevent successful incorporation of the benefits of TOD to provide access to healthy food. TOD places increased emphasis on reconnecting city centers to resources including jobs, which is important because three-quarters of all jobs are located outside the city center, and lower-skilled workers

bear the heaviest commuting burden as their jobs have moved to outer urban rings that often lack access to public transportation[6]. Reassessing what resources are lacking for survival for those with low to moderate incomes presents an opportunity to re-energize an effort around access to healthy food. TOD presents a much larger framework with momentum and backing of federal and state officials, but also boasts a proven track record to resolve equity issues. Even with this proven track record, TOD is a relatively misunderstood concept.

TOD is the fast-growing trend that creates livable communities by creating compact, walkable communities around high quality transit systems[7]. These pedestrian-friendly, mixed-use communities provide relief from automobile-dependent lifestyles by increasing access to transit for visitors, residents, and workers, thus enabling them to drive their cars less and ride transit more[1]. These communities also make it possible to live a higher quality of life without complete dependence on a car for mobility and survival. The option to choose where to live, work, and socialize with maximum access and minimum effort creates benefits by proactively and strategically locating mixed-use communities within a half-mile of a transit station. In the most successful TODs, transit stations integrate seamlessly; providing mobility options for those who live near transit station locations, thus creating "activity nodes." Residents in activity nodes experience many benefits including reduced traffic and reduced vehicle miles traveled (VMT), which reduces air and water pollution; these effects also lead to asthma and environmental mutation/defects, respectively. Residents also experience increased safety via TOD design guidelines, which reduces the likelihood of walking in dimly lit streets. TOD can also increase ridership and bolster households' disposable income. Other key benefits of TOD include decreasing infrastructure costs, encouraging economic development, and contributing to more affordable housing. Residents living in close proximity to transit stations are more likely to use "active" modes of transportation; including walking to bus and rail stations[8]. Other hallmarks of TOD communities include a diversity of land uses, grid street and sidewalk networks, in close proximity of housing, retail and employment, and accessible, high-quality transit, all of which are correlated with higher rates of walking and biking, lower probabilities of being overweight or obese, and lower risks of life threatening, obesity-related diseases for residents[8].

Sharing the Road: Escalating gas prices and the increased prevalence of obesity has provided incentive to use alternative means of transportation which include walking, biking, and trains to decrease dependency on cars.



Many lower-income households make significant trade-offs between lower housing prices and higher commute costs. Providing low-cost housing near transit significantly lowers the combined housing and transportation burden. While the average American family spends roughly 19 percent of household income on transportation, households with access to good transit service spend only 9 percent[8]. TOD increases physical activity, provides opportunities for all income levels, and even encourages a number of health benefits. TOD helps provide access to a variety of equitable resources that are currently not available to people with low to moderate incomes.

A lack of access to healthy food affects the nation on a larger scale than it has in recent decades. Over 23 million Americans, including 6.5 million children, live in areas with poor access to fresh, healthy, and affordable food. This translates into the lack of a supermarket or grocery store that serve healthy food (fresh fruits and vegetables) within a mile[9]; these areas are often referred to as food deserts. Food deserts are usually located in low-income areas, dominated by minorities. In fact, just 8 percent of African Americans live in a census tract with a supermarket[9]. A lack of access to healthy food has led to increased food insecurity, which is the uncertainty of when one's next meal will be and where it will come from[8]. A lack of access to healthy food has also led to an increase prevalence of obesity and a larger time commitment dedicated to looking for and traveling to healthy food, which increases transportation costs. A comprehensive look at how a lack of income and/or transportation has affected citizens in rural, suburban and urban neighborhoods alike, sheds light on how these variables result in a lack of resources to dedicate to the search for fresh and healthy foods.

Poverty, food insecurity, and income level play a role in determining why America has become increasingly unhealthy over the decades. For example, obesity among food insecure individuals –as well as low income individuals- occurs because these groups are subject to the same influences as other Americans, including sedentary lifestyles and increased food portions among several others[10], but they also face unique challenges in adopting healthful behaviors. These unique challenges include greater exposure to marketing of obesity-promoting products, limited access to health care, and fewer opportunities for physical activity. Food deprivation and overeating due to food insecurity are challenges unique to these demographic groups. There are almost one billion food-insecure people in countries with the lowest income levels [11] and 35.5 million people lived in food-insecure homes. People living below the poverty line, minorities, and households headed by single women[11], particularly those with children, are especially at risk. This further indicates that minority groups are disproportionately affected by a lack of access to healthy food.

Minority groups, such as Latino-Americans, are affected by a lack of healthy food. Unfortunately, of all Hispanic and Black Households, 27.6 and 25.3 percent of live below the poverty line, respectively; this percentage represents a drop of 26.5 percent for the Hispanic population – the nation's fastest growing

minority group[10]. One in four Black households experience food insecurity, which is over 10 percent higher than the national average (14.5%)[10]. Similar to Hispanic children, 29.9 percent of Black households with children face food insecurity, but unlike Hispanic families, 14.6 percent faced low food security. An astonishing 10.5 percent of Black households faced very low food security, which represents the most severe incidence of food security.

Latino families are less likely than non-Latino White families to live in neighborhoods where healthy food is available and sold at affordable prices[12]. Furthermore, Hispanics make up more than one-fifth (21.2%) of all food insecure households[13]. When compared to the U.S. Department of Agriculture's (USDA) Thrifty Food Plan (TFP)—the standard for the least expensive diet that meets basic nutritional guidelines—even food secure Latinos may only be spending a minimal amount on household food purchases[13], indicating there is a predisposition to spend money on needs that have been prioritized higher than access to healthy food. Food insecurity also has a profound effect on children in Latino families; rates of food insecurity are highest among Latinos and are particularly acute among Latino families with children. More specifically, more than one in four (26.9%) Latino households were food insecure, compared to about one in ten (10.7%) non-Latino White households[13]. In general, food access also disproportionately plagues non-Latino Black households when compared to White households. Similar to Latino households, when analyzing Black households one in four (25.7%) households were identified as food insecure.

Numbers Don't Lie: Food insecurity, often described as the uncertainty of where one's next meal will come from, affects minorities at a much higher rate than White families. Approximately, 1 in 4 Latino and Black families can be classfied as food insecure when compared to White families.

Another food insecurity trend shared by Latino and Black households is identified when comparing trends specific to households with children. For Black and Latino families with children under age 18, the rate is over two times that of White households. Approximately one in three Latino (32.1%) and Black (31.9%) households with children are food insecure, compared to one in seven (15.5%) White households in which children are present[13]. To put the effect of food insecurity on Latino children in perspective, there are nearly 5 million children living in food insecure households; representing 29.8 percent of all children in food-insecure families[13]. These same children are the subjects of candy and fast food marketers, but few

healthy options are located nearby. The overall effect of food insecurity is apparent when considering its disproportionate effect on these two minority groups, but the introduction of proximity to a metropolitan area presents another dimension of food insecurity.

Commercial development is undergoing a shift in design from large, sprawling buildings to development influenced by New Urbanism ideals. This shift includes encouraging compact design, vertical construction as opposed to horizontal, and identifying opportunities for infill development in an effort to use land more efficiently. As a result, often times it is difficult for large grocery stores to locate in smaller neighborhoods, because they do not have necessary footprint or foot traffic to satisfy the interests of developers. In a sense, zoning regulations, not just store owners and big box retail and supermarkets, are responsible for food insecurity resulting from lack of access to grocery stores. For example, Walmart proposed the construction of four of its 180,000 square foot supercenters in food deserts in Washington, D.C. The plan faced opposition partially because of the organization's reputation, but also due to design guidelines that restrict the maximum footprint of development above a certain size pending further analysis[14]. Similarly, Walmart proposed another supercenter in the Inglewood neighborhood of Los Angeles, California. This proposal was rejected by a decisive margin and labeled a 'Trojan horse' after not agreeing to fund cost-benefit analysis on a store-by-store basis for any outlet over 100,000 square feet to demonstrate that the store would not have an adverse impact on the surrounding community[14]. Other factors play in to the reason why there are more grocery stores locating in suburbs and not inner cities.

Outside the Box: "Big box" retailers have drawn the ire of neighborhood residents due to traffic congestion, perceived lack of investment in surrounding neighborhoods, and economic cannibalism of pre-existing 'mom and pop' stores.

Fifty years ago, small neighborhood mom and pop markets were common in urban neighborhoods and small towns. Today such markets only make up 17 percent of the grocery landscape in the United States[15]. This may be due to storeowners wanting to turn a profit and go where they can serve the most people while meeting their own financial goals. Nowadays, big box retail stores and supermarkets are choosing to locate in the suburbs, concentrating less healthy alternatives such as fast food restaurants, convenience stores, and gas stations in low- income neighborhoods. This concentration results in the creation of food swamps[29]; an oversaturation of unhealthy food resources in one area. In the Atlanta

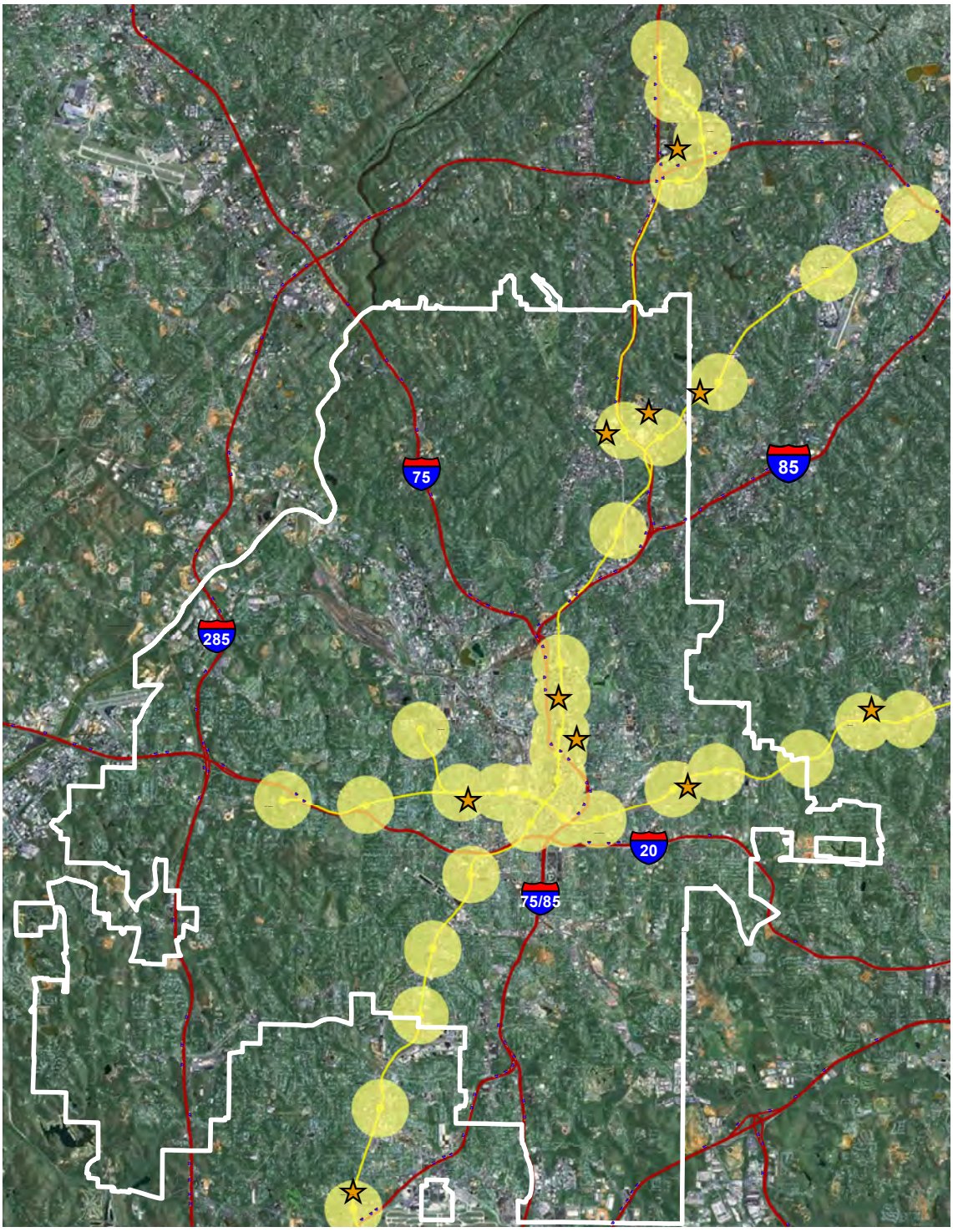
region, the Atlanta Regional Commission (ARC) oversees development of large-scale projects through a task force that reviews Developments of Regional Impact. As the regional planning and intergovernmental coordination agency for the 18-county area, the ARC is responsible for defending the region against instances where the interest of the community is at stake, a power granted by the Georgia Planning Act. Specifically, the ARC is required to review any development project that is likely to have an impact beyond the host local government's jurisdiction. These rules include the flexibility for Regional Commissions (RCs) to "establish alternative DRI requirements, specifically tailored to the needs of their region[16]." The current DRI thresholds include metropolitan areas with a population of 50,000 or more as part the decennial U.S. Census, but large big box retail stores often do not meet the threshold to be reviewed unless they are part of a new strip development. Without any changes to current legislation, large retail grocery stores will continue to face obstacles that inhibit them from locating in dense inner city neighborhoods. To mitigate the effects of food deserts and food swamps, considerations regarding size and location play a role in the decision making process. The number of grocery stores is not the most important measure to providing access to healthy food; it is the location of these grocery stores.

Although there are over 700 grocery stores in Georgia (*See Map on Page 13*), only ten (10) are located with a half-mile of a MARTA stations, and of the 10, only one (1) is located south of Interstate 20. This qualifies the claim from residents of the area that a disparity exists. The inequity in these areas has led to several documented instances of civil unrest. Residents of southwest Atlanta have demanded that new grocery stores be placed in the neighborhoods[17], but to no avail. A lack of healthy grocery store locations in underserved communities is substantial in itself, but these negative effects are magnified when other suitable, healthy options are limited.

The poor location of grocery stores has affected the eating habits, health, and economic viability of the population that lives in low-income neighborhoods. Low-income youths and adults are exposed to disproportionately more marketing and advertising for obesity-promoting products that encourage the consumption of unhealthy foods and discourage physical activity. This includes exposure via fast food commercials and billboards, sugary beverages advertised on television shows, and video games[10].

Furthermore, this type of advertising has a particularly strong influence on the preferences, diets, and purchases of children who are targets of many marketing efforts[10]. The increase in cost of groceries in food deserts as compared to suburban markets has a larger impact on low-income neighborhoods and minorities. It can potentially lead to families shopping for foods based on affordability rather than nutritional needs, or worse, eating less or skipping meals to stretch food budgets. This causes a person to overeat when food does become available, thus creating chronic ups and downs in food intake, which contributes to weight gain that leads to obesity[10]. Low-income parents also face a unique challenge as it

Grocery stores located with a half-mile of a MARTA transit stop



relates to access to healthy food. This challenge can be described as the "feast or famine" scenario; wherein the head of the household, particularly mothers, often restrict their food intake and sacrifice their nutrition in order to protect children from hunger[10], yet another reason why food insecurity disproportionately affects low-income communities. Heads of the household often have to make a choice between feeding themselves or their families, but this is not the only way increased costs of living affects affordability. Housing affordability is directly affected by a change in housing and transportation costs. The search for the nearest affordable healthy shopping options can lead to increased costs, because families are forced to travel to neighboring cities or towns. Although Atlanta boasts the second most affordable housing market in the United States[18], when transportation costs are considered, this is no longer true. Housing cost burden exists when a household spends more than 30 percent of their income on housing costs. When transportation costs are taken into account, one is deemed cost- burdened when 45% of annual income pays these costs. In the metro Atlanta region, 80% of households spend more than 45% of their yearly income on housing and transportation. A typical household spends an average of $14,305 in transportation costs annually, $1,192 per month. This ranks Atlanta 44th out of the 50 largest metropolitan areas in the nation[19]. Working families in the Atlanta region, with incomes between $20,000 and $50,000, spend 61% of their yearly budget on housing and transportations costs[20]. Unfortunately, suggesting that working families take public transit is not the solution, because working families who live in downtown Atlanta neighborhoods experience travel times to work twice as long by public transit than by private car[20]. Traveling to and from a destination puts a major burden on the residents of the region, but this effect is magnified when considering vulnerable populations.

Light has been shed on the lack of access to healthy food at a national, regional, and state-wide scale. An in-depth look at the variables discussed in literature provides a perspective of the problem in the Atlanta region. The effect of food insecurity and a lack of access to healthy food reveals a trend that is alarming to many who do not realize that a dichotomy exists. The ARC has provided a framework that can be used to identify the population that needs access to healthy food and determine where to locate resources.

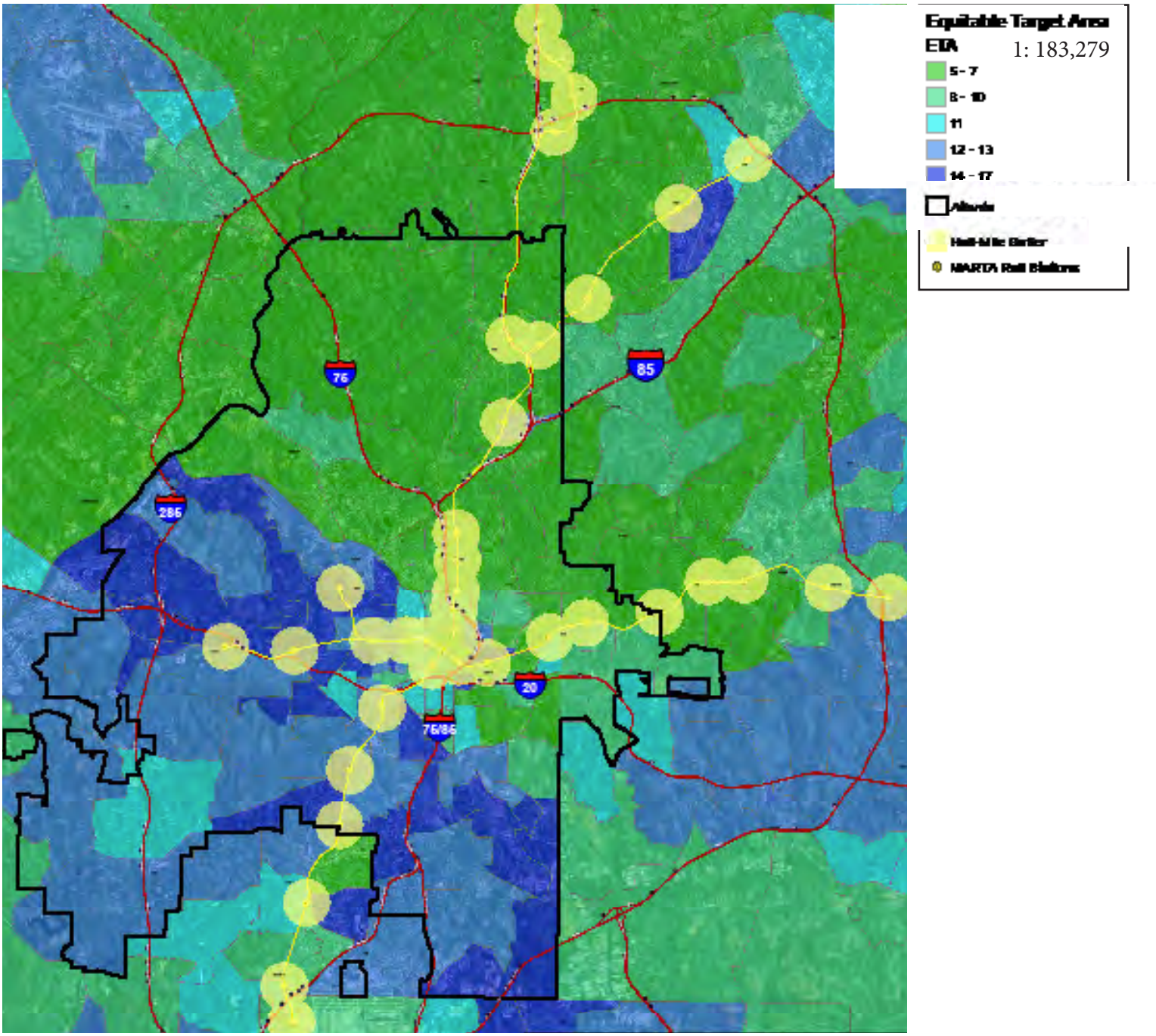
Research suggests that TOD can be beneficial in creating social equity for vulnerable populations. These vulnerable populations include the minority and elderly population, dependent children (under the age of 18), populations with low to moderate incomes, residents who do not have access to a vehicle, and populations with a concentrated need for low-skilled employment. TOD can potentially reconnect these vulnerable populations to healthy food via public transit. Reconnecting vulnerable populations to resources and healthy food begins with identifying those in need. In doing so, it essential to map areas where the vulnerable populations are located and their proximity to public transit.

The Atlanta Regional Commission (ARC) has produced an index that identifies concentrations of environmental justice communities in the region. The index is based on the regional averages of five parameters: the elderly population, low education-attainment, distribution of zero-car households, poverty, and the distribution of minorities[12]. Several of the populations tracked by the index coincide with vulnerable populations as identified by equity research. The analysis identified the vulnerable population by census tract and consolidated them into groups called Equitable Target Areas (ETAs). An analysis of the distribution throughout the region reveals that most of the ETAs, regardless of the variable being measured, share a trend geographically. More specifically, a large majority of ETAs are located in south and west Atlanta. The maps in the section illustrate the individual components that make up an ETA and their location in the metro-Atlanta region.

Analysis

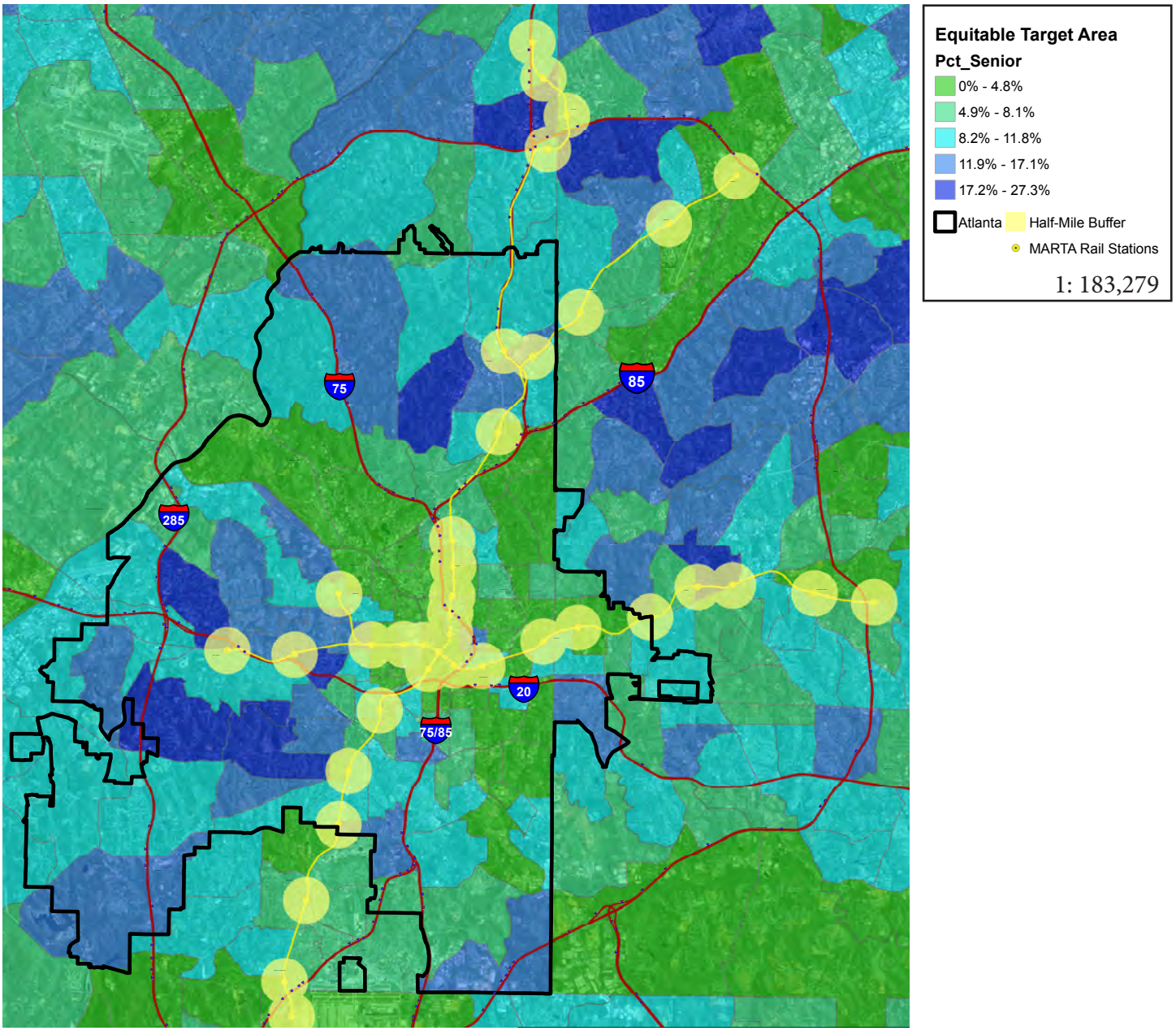
Equitable Target Areas (ETAs)

The map below illustrates where ETAs are located in the region. The scoring of ETAs was based on receiving a 10 or above on the index versus the average in the region (8). The distribution of ETA areas is shown in the map below.



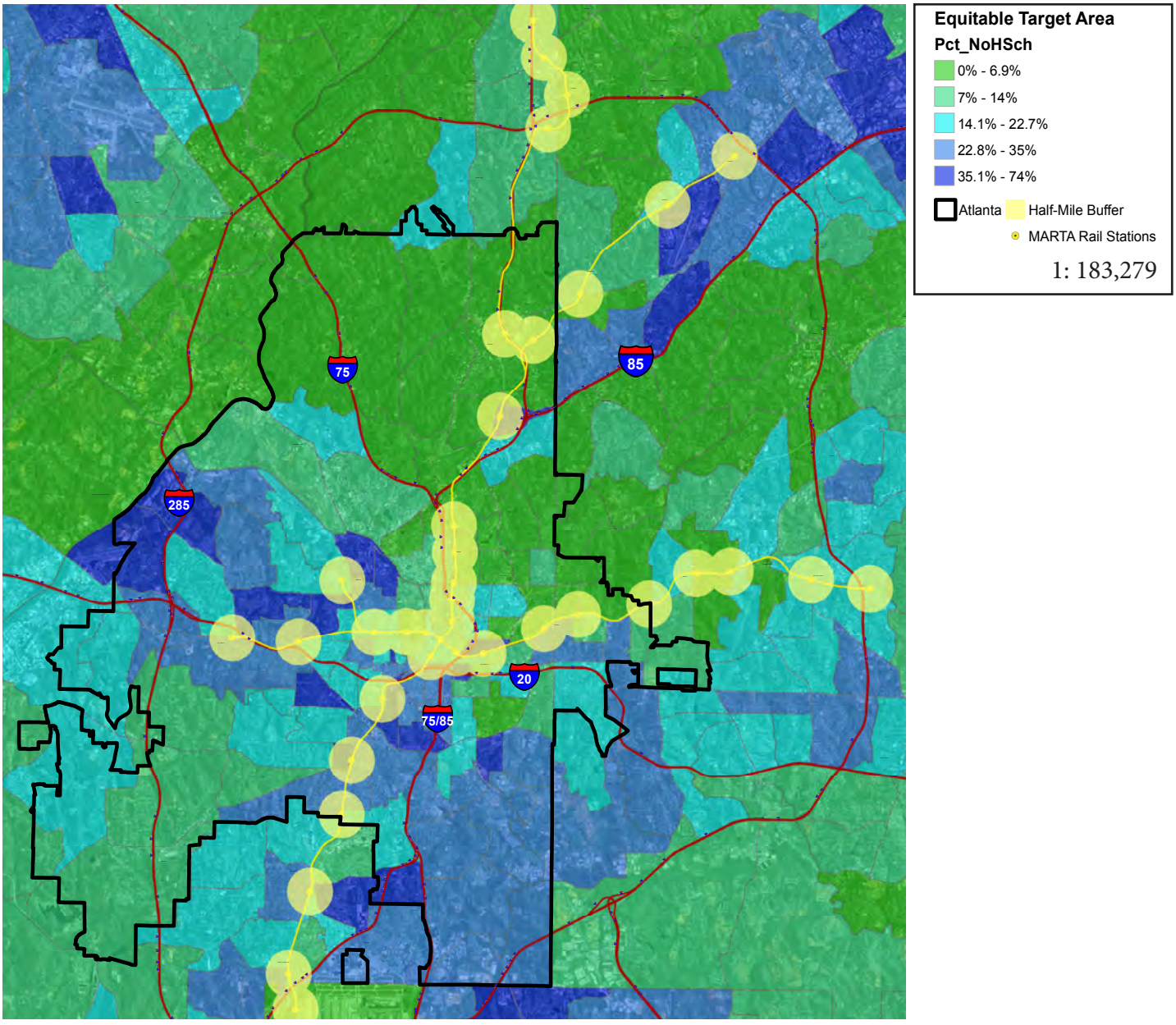
Elderly Population

The map below illustrates that distribution of the elderly population in the region. By definition this demographic is 65 years of age or older. Of all ETA areas, 49 percent of census tracts reported a total percent of elderly residents above the regional average for this category (7.99%). The trend of the distribution is not immediately clear, because the elderly population is dispersed throughout the region. However, it is clear that the population south of Interstate 20 and west towards the Interstate 285 Perimeter boundary has a large at-risk population, because the area already lacks other resources as illustrated in the other maps (See other maps in the Analysis section).



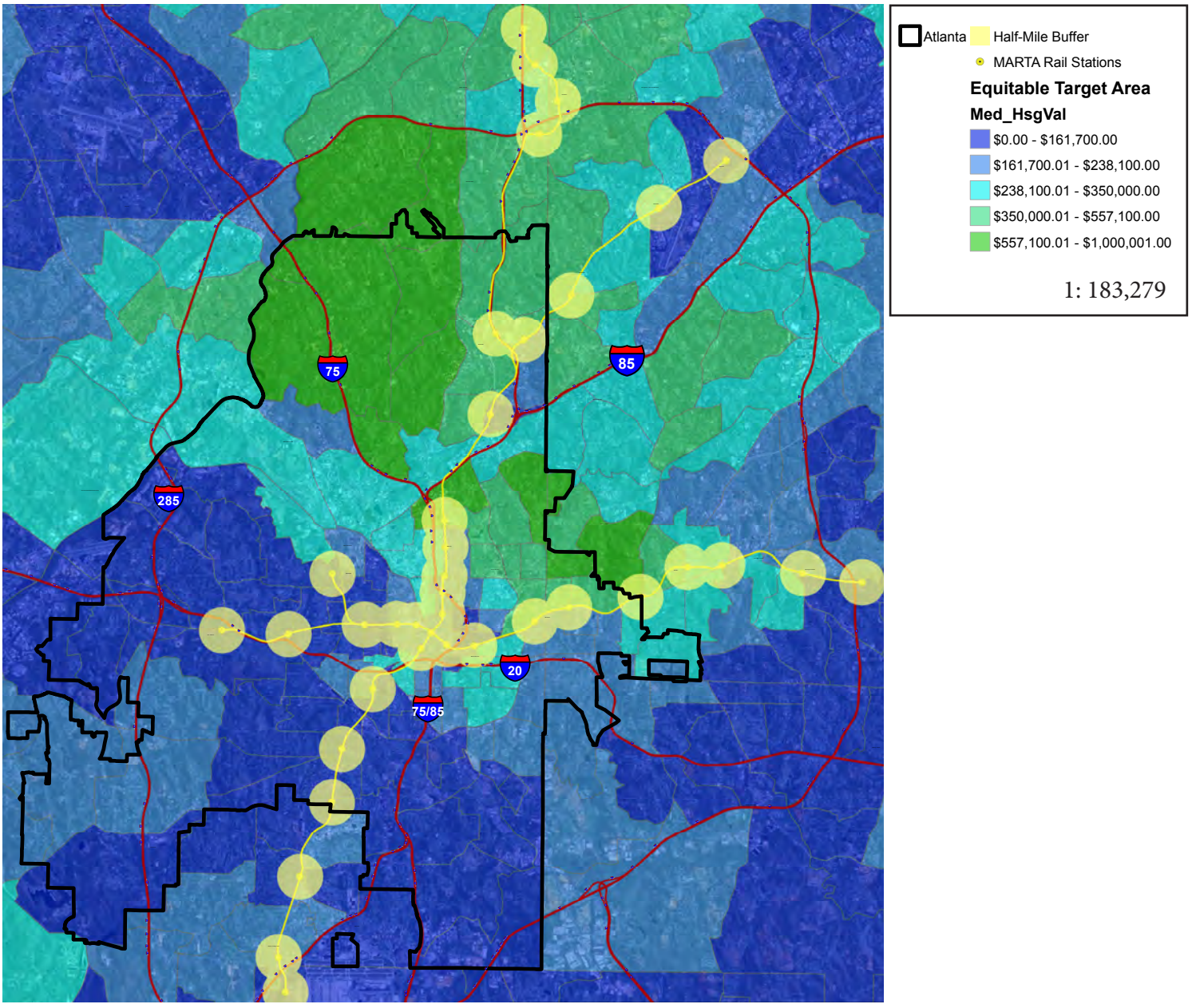
Educational Attainment

The map below illustrates the distribution of the residents with low educational attainment in the region. By definition this demographic is 25 years of age or older without a high school diploma or equivalent. These residents make up a large portion of low-skilled workers, which has an effect on disposable income. This population is more likely to depend on public transportation for travel to and from work. Of all ETA areas, 49 percent of census tracts reported a total percent of residents above the age of 25 without a high school diploma or equivalent above the regional average for this category (12.95%). The distribution within the Perimeter is located south of the Interstate 20 and west towards the Interstate 285 Perimeter boundary for census tracts with residents above the age of 25 without a high school diploma.



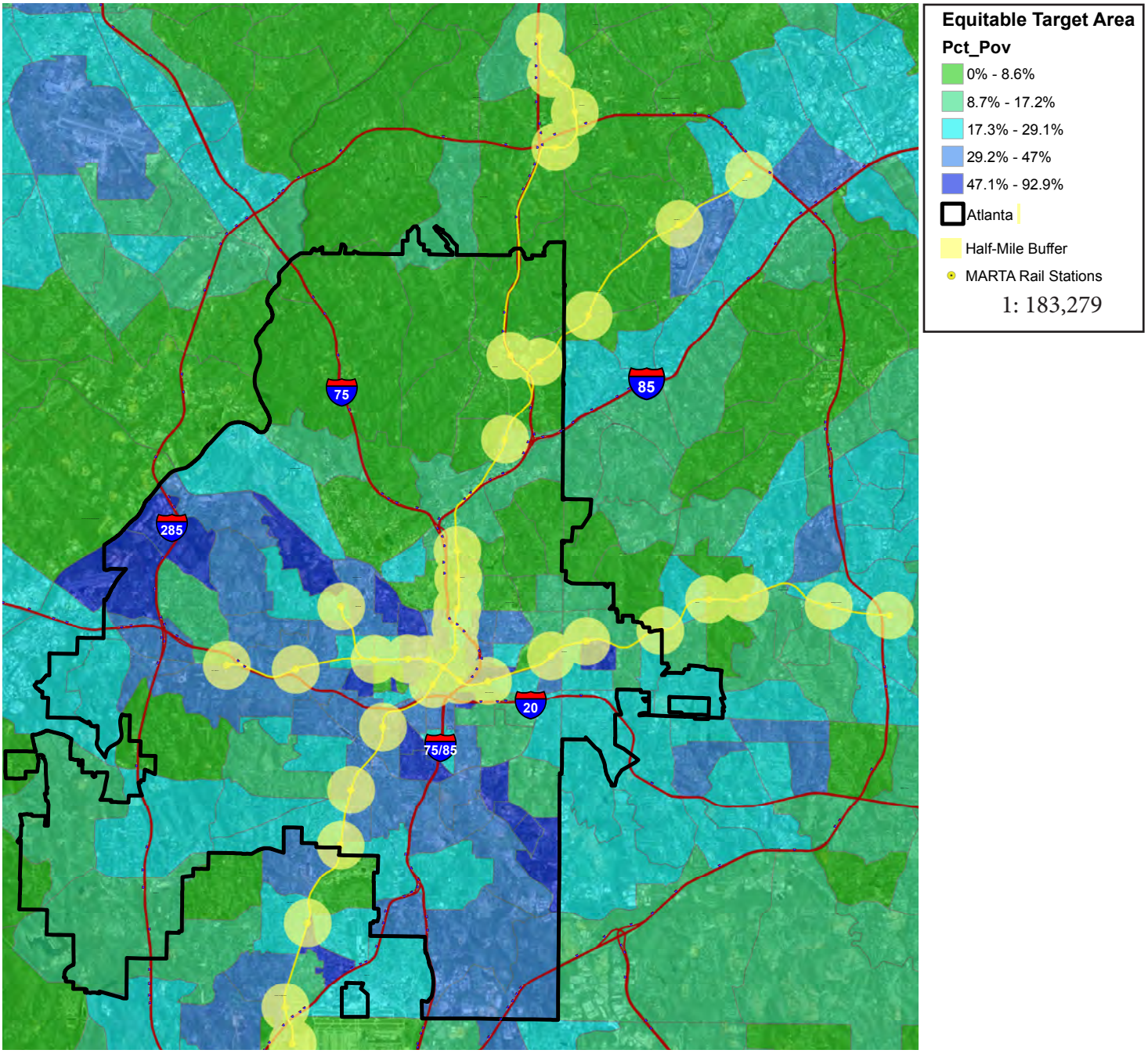
Median Housing Values

The map below illustrates the distribution of Median Housing Values in the region. Areas with low median housing values share a correlation with poverty. If these values continue to decrease, it can lead to disinvestment, which lowers property values. This ultimately leads to paying more on a property than it is worth, leaving the owner with little disposable income to spend on housing cost or transportation costs. Of all ETA areas, 63 percent of census tracts reported median housing values below the regional average for this category ($202,525). The distribution within the Perimeter is located virtually everywhere except for North Atlanta. North Atlanta also has a higher educational attainment, higher median housing values, and lower poverty rate than those located in south Atlanta.



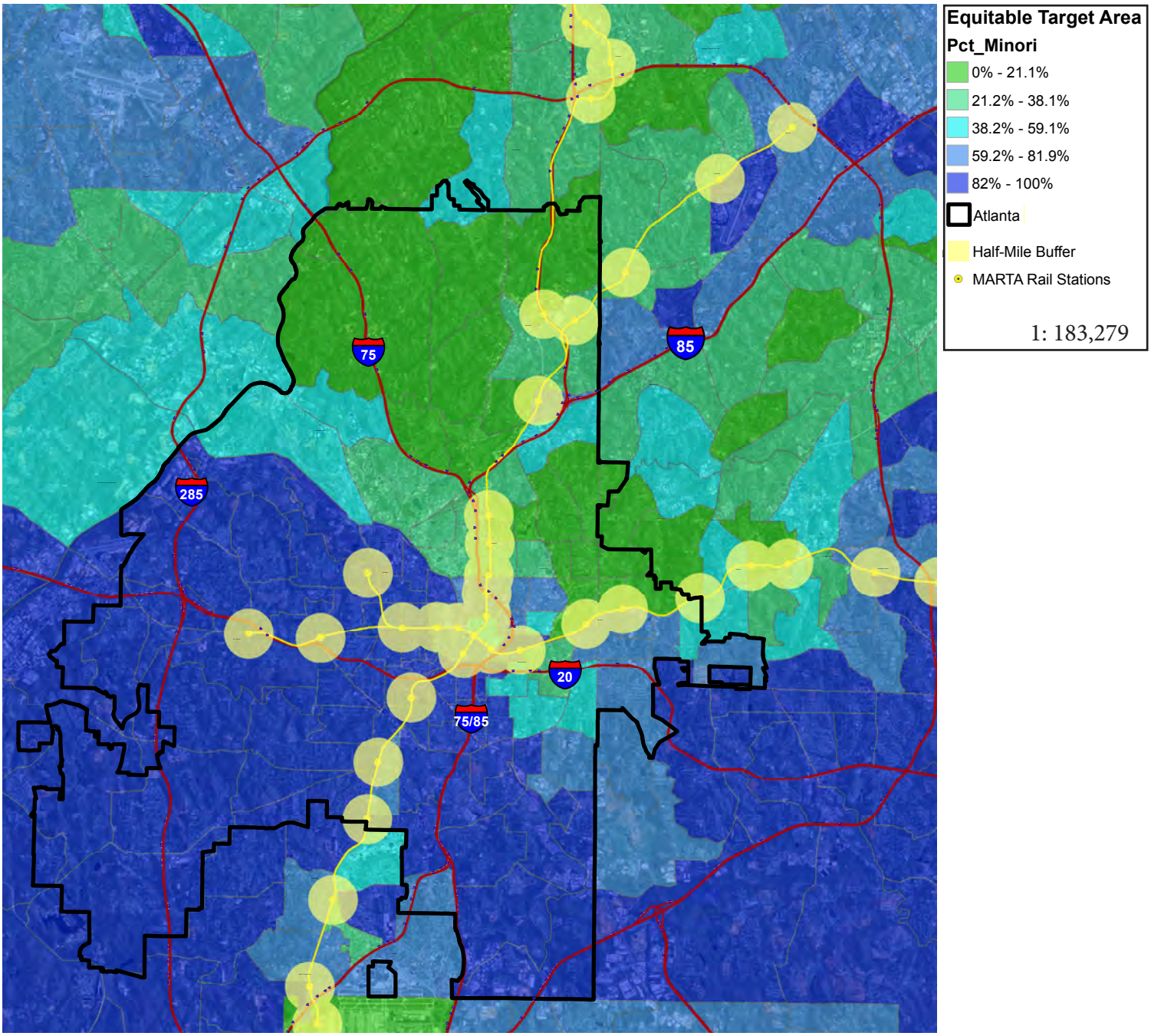
Poverty Rate

The map below illustrates the distribution of poverty in the region. Trends like low educational attainment or lack of employment opportunities are concentrated in impoverished areas. People living in impoverished areas are less likely to have disposable income to spend on housing or transportation costs. Of all ETA areas, 46 percent reported a poverty rate above the regional average for this category (11.59%). The distribution within the Intestate 285 Perimeter is located near the inner-city, south of the Interstate 20 and in west Atlanta towards the Interstate 285 Perimeter.



Minority Population

The high concentration of the minority (non-white) population in the region is located south and west Atlanta, but also in the western half of DeKalb County. Traditionally, minorities make less money than Whites making them more vulnerable to cost increases. Of all ETA areas, 41 percent reported a poverty rate above the regional average for this category (47.45%). No information was included related to ETA areas in DeKalb County, but the area also had a high concentration of minorities



Areas of Opportunity

The common trend for a majority of the variables is that south and west Atlanta scored poorly using the ETA index. Another factor to consider is that these areas are sites for the region's food deserts, further exacerbating the lack of resources concentrated in these areas. To mitigate similar instances of inequitable allocation of resources, the Pitton Foundation and Reconnecting America compiled the Denver Equity Atlas. This resource was formulated to provide best practices that can improve access to several of the variables that plague the metro Denver region; including access to healthy foods. Adopting a similar system in the Atlanta region can serve beneficial to locate needs and resources of the region's underserved communities.

The Metro Atlanta Rapid Transit Authority (MARTA) owns 37 stations in the metro-Atlanta region, but not all stations have been successful at implementing TOD. Several MARTA stations, like Lindbergh MARTA station, have provided residents with a great mix of land uses around the transit station, which is the goal of TOD. An in-depth look at the MARTA stations with the lowest ETA scores reveals two areas where equity and food issues currently exist. The first station, the H.E. Holmes MARTA station, is located on the west side of Atlanta. Most of the area within a half-mile of the station is located in a food desert. A comparison to the 36 other MARTA stations ranks this station near the bottom of household income ($29,683) and employment density (less than 4 jobs per acre)[21]. Technical assistance is available to transform this area into a TOD hub by capitalizing on the abundance of vacant property and parking lots in the area.

In total, MARTA owns 7.6 acres of parking and vacant land south of the station[21]. This land can become the location of a catalytic project reconnecting the neighborhood to resources. Acquiring this land also represents an opportunity to provide access to healthy food through tactical urbanism. One barrier to overcome is the amount of parking lots in the area. A potential solution to this issue is for MARTA to allow flexibility on the land lease requirements, because ground lease transactions are far less typical in the Atlanta region[21]. Overall, the market value of this project would total approximately $40 million dollars, but the success of the project depends heavily on the existence of subsidized funding[21]. Minor modifications can be made to couple this project with the construction of community or market gardens in the area, thus improving access to healthy food, and creating jobs for the people in the surrounding neighborhood.

H.E. Holmes MARTA Station (Top) and surrounding area (Bottom)

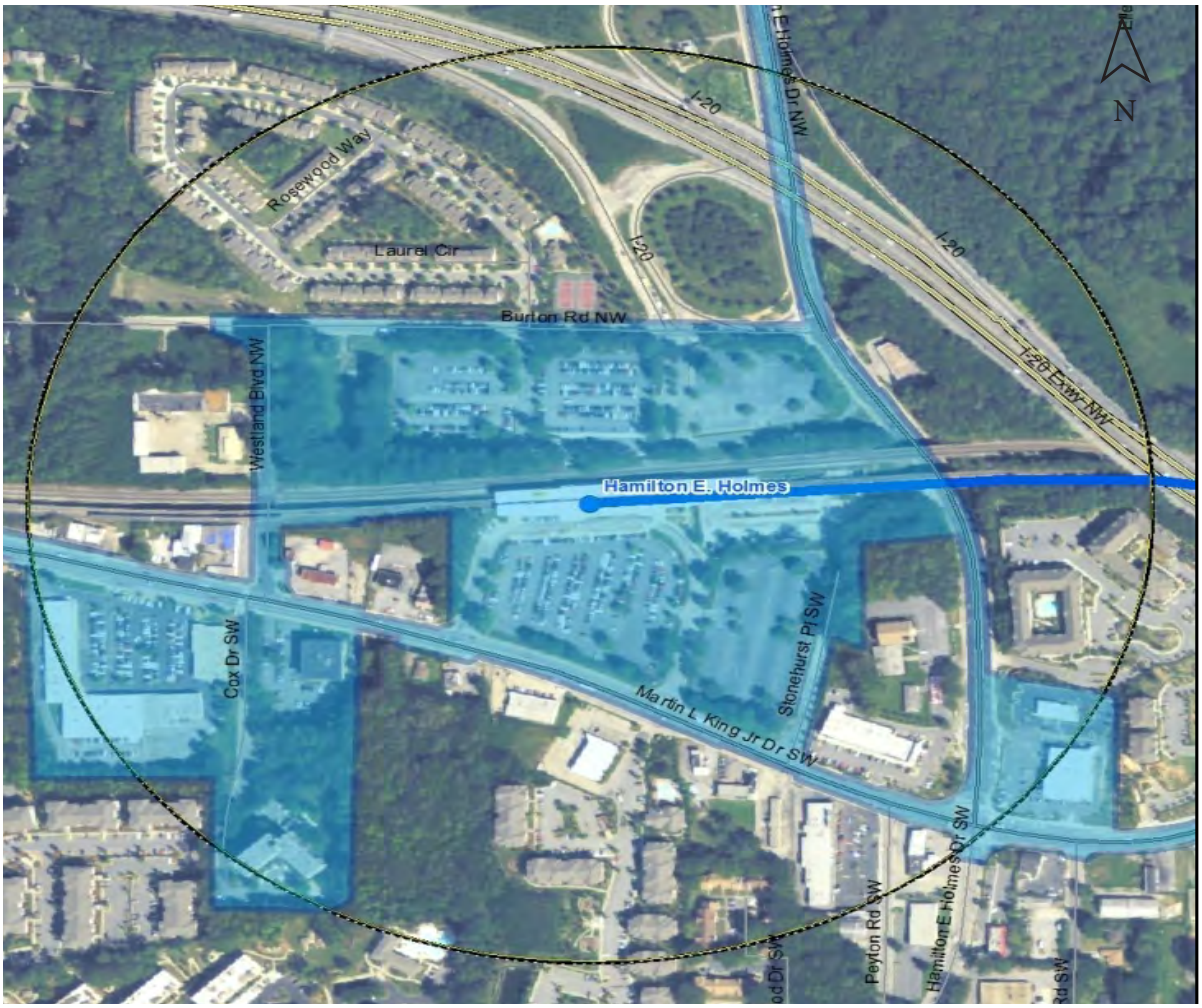
MARTA Property

1/4-Mile Radius Station

MARTA Blue Line

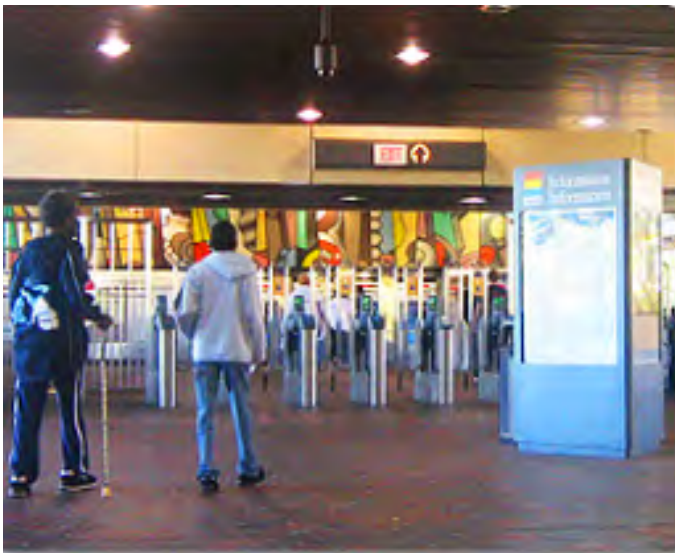
Potential Private Development Property

Howell Mill/ ML King TAD(Current/



An opportunity similar to those available at the H.E. Holmes MARTA Station can be adopted at the King Memorial Station, which is also located in an ETA area south of Downtown Atlanta. In addition, this area is located in a food desert, but that is where the similarities end. One key difference between the two stations is that, unlike H.E. Holmes, immediate access to healthy food exists in the form of one Atlanta's largest community gardens. Truly Living Well Center for Natural Urban Agriculture (TLW) represents existing infrastructure residents in this area can utilize to provide access to healthy food. TLW has a presence in the neighborhood and can expand its footprint. Expansion is contingent upon the construction of TOD pedestrian facilities on the 30 acres of available opportunities located within a half-mile of the transit station[21]. One barrier to overcome is the coordination of streetscapes and other walkability enhancements that create a cohesive environment and ensure transit accessibility to TOD[21]. Furthermore, because a high concentration of seniors is located in this area, resources to provide the elderly population with access to healthy food is critical.

King Memorial MARTA Station



Area surrounding the King Memorial MARTA Station

Recommendations

Several cities have researched best practices to address issues including the abundance of vacant land and property and the fear of gentrification. These strategies help to ensure that existing and expanding transit systems in their respective regions provide greater access from affordable housing to jobs, schools, health care and other essential services including healthy food access to the underserved population[22]. The Denver Equity Atlas identifies access to opportunities, or the lack thereof, on a regional scale and many similar opportunities exist in Atlanta. The objective of the Denver Equity Atlas is to ensure that the region's significant investment in new rail and bus service provides greater access to opportunity and a higher quality of life for all of the region's residents. Emphasis should be placed on the economically disadvantaged populations who would benefit the most from safe, convenient transit service[22]. The Atlas focuses on establishing a baseline for measuring equitable access to opportunities. Creating a similar document builds the case for the Atlanta region's needs for creating and enhancing access to opportunities through affordable transportation-oriented development options around MARTA transit lines.

The Denver Equity Atlas examines patterns including demographic characteristics, access to affordable, quality housing options, access to jobs and economic development opportunities, and educational opportunities throughout the region that highlight the need for equity. For the purpose of this document, the most important tenet is access to healthcare, healthy foods, and recreational facilities. This methodology identifies census tracts with low food access located more than one mile from grocery stores, farmers' markets, community and market gardens, and other sources of fresh and healthy food. Next it maps the distance of the identified location to affordable housing. The result provides further insight on locations of food deserts and their relationship to income in the region. Using this data, a set of potential solutions can be recommended for improving access to healthy food. These recommendations can result in improvements to existing bus routes, pedestrian facilities, and other forms of transportation infrastructure; however, this does not address relocating grocery stores near residents' homes[22]. This is important because in most low-income neighborhoods there is already a high concentration of fast-food outlets and convenience stores.

Eliminating the Need for Transportation: Fulton Fresh mitigates barriers to fresh and healthy food by delivering fruits and vegetables to those in need on a seasonal basis.

Another recommendation made in the Denver Equity Atlas is to convene a food-access taskforce and identify policy recommendations for facilitating grocery retail development. This includes economic development policies and practices and financing strategies. Efforts to facilitate development of healthy food retail across the Metro Atlanta region should be coordinated with transit planning and station area development. These efforts represent opportunities to locate food retail within station areas. The Equity Atlas represents one manner in which the metro Atlanta region can mimic the research completed by others jurisdictions, such as Denver, to identify locations and examine equity issues related to food access. Cleveland, also provide solutions through urban agriculture that potentially resolve food access issues in the Atlanta region.

Vacant Housing: The increase in vacant land and property in metro-Atlanta presents an opportunity to repurpose the land on which these buildings are located. Guerilla gardening is one resolution being applied in neighborhoods like Vine City.

Housing vacancy and foreclosure rates sky-rocketed in the Atlanta region due to the economic downturn. As a result, Atlanta's average homeowner vacancy rate is the third-highest among major U.S. cities, standing at 4.2 percent[23]. Fortunately for Atlanta, the rate has been dropping since early 2011, when it stood at 5.4 percent[23]. However, the trend for rental vacancies has been worse for Atlanta, rising from 9.4 percent in the third quarter of 2011 to 12.4 percent in the first quarter of 2012[23]. Similar to Atlanta, Cleveland, Ohio, has experienced a foreclosure crisis that has led to a surplus of vacant lots. The historic loss of industry and the effects of the foreclosure crisis have left Cleveland's population dwindling to about 400,000 residents and an estimated 15,000 vacant houses[24]. With an aging housing stock that was built for more than one million, the need for creative ways to decrease the surplus is being explored. The city created Cuyahoga County Land Bank in 2009 to stem the problem, but the organization is overwhelmed with the number of properties it receives per month (110) and the amount it has had to demolish[24]. Making matters worse is that the money is slated to run out by the end of the year. Since inception the land bank has sold more than 500 properties, of which 40 percent are owner-occupied. The land bank also rehabs and sells houses, selling 17 of the 27 houses it has rehabilitated on its own dime[24]. This quandary has left the city wondering what other options it can explore to ensure that the highest and best use of the land is realized.

One suggestion is the use of urban agriculture as a form of tactical urbanism to capitalize on abundance of vacant land. The issue is not related the amount of land and foreclosed properties; it is related to what to do with these properties.

In preparation for such an undertaking, design and budget preparation guidelines have been compiled as part of the Re-Imagining Cleveland resource book to provide strategies and interim uses for vacant lots. Benefits of such a project include providing an opportunity for people with limited yard space to grow vegetable and herbs, providing healthy eating options for gardeners and their friends and family[25]. Another benefit is that these projects use vacant property to create community gathering spaces for residents and foster a neighborhood network that is committed to increased health and quality of life[25]. The resource book also describes the level of community commitment needed (the level or participation needed in order to properly maintain the project) in addition to cost estimates, suggestions for ideal locations, and procedural best practices for potential projects. Other solutions suggested include side yard expansions, street edge improvements, and market gardens. The resource book describes many uses of vacant land and

Cleveland: In reponse to vacant properties still owned by absentee landowners, the Cuyahoga County Land Bank repurposes, sells, and rehabs vacant land and property which stabilizes property values in neighborhood with increasing vacany rates.

property that promote a higher quality of living, but this does not directly impact those only have access to convenience stores in food swamps. To address this concern in New York, the City has initiated a program that incentivizes offering healthier food alternatives.

New York City has created the Food Retail Expansion to Support Health (FRESH) program, which provides incentives to eligible grocery store operators and developers through the New York City Department of Planning. Criteria that stores must meet include providing minimum retail space dedicated to general lines of food and nonfood grocery products intended for home preparation, consumption and

utilization[26]. Other criteria include providing at least 50 percent of a general line of food products and 30 percent of retail space for perishable goods that include dairy, fresh produce, fresh meats, poultry, fish, and frozen foods intended for home preparation, consumption and utilization[26]. The program also offers zoning incentives, including additional development rights, reduced required parking, and exceptions for larger stores in light industrial areas. Financial incentives like real estate tax deductions, sales tax exemptions, and mortgage recording tax deferrals are offered as part of the FRESH Program to encourage stores to sell healthy products[26]. Currently 13 projects have been completed in New York City with the

New York: The FRESH Program provides developers with incentives to increase access to fresh and healthy food in New York City, NY.

mission of assisting store operators with renovations of existing retail space or construction of retail space that will be leased by a full-line grocery store operator[26]. The use of tax and zoning incentives increases access to healthy food, but making changes to the zoning codes and or ordinances is another way to increase access to healthy food.

The City of Portland has used zoning to mitigate the effects of food insecurity and create jobs, while bringing money into the city. Portland has long been known as a city that promotes growing, buying, and selling healthful foods [27]. Shockingly enough, the city lacked any type of comprehensive zoning regulations related to urban agriculture until recently. Several barriers were identified which hindered the use of the common community gardens and market gardens. Market gardens are larger than community gardens and allow for the sale of the items grown on-site. Before revisions were made, large-scale gardens and on-site sales were not permitted in neighborhoods. Other issues included unclear regulations and a lack of policies to monitor negative externalities[27]. The revised code limits the underlying zoning to a half-acre (up to one acre in some areas), and mandates that a community notification process be used to notify residents of information specifically related to the garden. As part of this notification process, larger gardens must notify the community of the specific functions of the garden, including days and hours of normal operation and a separate set of hours for motorized equipment[27]. Portland's plan also added alternate ways of conserving land suited for agriculture, like using agricultural zoning overlays and purchasing agricultural easements[27]. The plan specifies setbacks, lot sizes, and temporary housing (greenhouses) to attempt to mitigate some of the effects that larger gardens have on walkability. The Portland comprehensive

plan has gone from one that merely looked the part, to a comprehensive plan that is effective and easy to comprehend. This creates an opportunity for the City and community members to focus their attention on considerations and recommendations that result in innovative ways to attract jobs (farmers and gardeners) to the community, while mitigating the effects of food deserts.

Prior to implementing these changes considerations must be made in advance to ensure that the process sustains minimal barriers to implementation. One of these considerations is the actual scope of food insecurity in Georgia. There are 2 million Georgians, including almost 500,000 children that do not have access to fresh produce[28]. The onus is on stakeholders, policymakers and residents of the community to provide alternatives to the pandemic. Several considerations must be taken into account before recommendations can be made to resolve the issue. These considerations include:

1. Scale. The concept of scale has long been a critique of local agriculture. Although the grassroots concepts, such as guerrilla gardening and fresh food trucks, address the immediate need for fresh and healthy food in the local area, this view may limit the ability of local programs to compete with big box retail chains. Mimicking the framework laid out by Georgia Organics could help to alleviate issues of scale and create a local food system. Georgia Organics used a wide range of tools, such as community outreach, acquiring of multiple lots of land on a grander scale, and partnership with other local organizations (ALFI) to create a large footprint in the region. This substantially increased their potential to assist those in need.
2. Values. A change in values and priorities is necessary to overcome the stigma attached to eating healthy. The mindset that food should be quick and filling as opposed to fresh and healthy is an obstacle to improving the nutrition of residents.
3. Action solely upon invitation. To make sure the planning and implementation process moves forward with minimal interruption, it is imperative that the planning process includes members of the community. Even though one may have the best interest of the neighborhood in mind, members of the community may take offense to outsiders coming in to fix a problem without receiving an invitation.
4. Empowerment of individuals. Empowering the community holds it accountable for changes they would like to see made. It also puts the community in complete control of the results of the plan.

- Outreach. This plan is proposed to ensure benefits to the community members who will be living in neighborhood after changes are made. Therefore, performing outreach is important to ensure that ideas of the community are not overlooked once an invitation is received. Convening an advisory board and task force made up of stakeholders, residents, policymakers, and those interested in the cause can accomplish this goal. The board can represent the interest of the neighborhood at Neighborhood Planning Unit (NPU) or church meetings, and other events hosted by pillars of the community and keep other interest groups

abreast to their plan of action.

- Employment and Autonomy. Adopting urban agriculture strategies provides employment opportunities, and allows participants to keep autonomy. It follows the idiom, "Give a man a fish and he eats for a day; teach a man to fish and he eats for a lifetime."
- Changing habit. Getting people to change habits that have put them in their current predicament is important to consider, because these habits limit their perspective. To be successful it must understood that the benefits of eating healthy are more important than continuing with current eating or shopping patterns. Therefore, eating healthy is contingent upon making a change in values.

6. Food as a social tool. Capitalizing on the concept of food as a tool has been used by many who believe that the bond people share with food can be beneficial to achieving a higher quality of life. Using voluntary methods similar to those used by educational institutions, like making farming an elective as part of the school curriculum, is just one example the can adopted locally.

- Education. Utilizing programs like USDA's Farm to School can help children understand the value of self-sustenance and eating healthy. It also provides the knowledge base to perform these tasks in the future. This knowledge can potentially lead to certification and job opportunities.

7. Location. The location of vacant properties is key when planning the size and scope of the project. To provide food on a larger scale it is more cost-effective to acquire adjacent properties as opposed to those that

Future Course of Action

are spread out.

8. Realistic Outlook. Avoid idealizing the reach of the process. One cannot expect a locally-owned corner store or market garden to have the reach of a big box retail store, unless a local food system is created. The goal is to provide access to healthy food to those who are underserved. Realistically not every meal can come from a local farmers' market, because not all markets produce meat and/or dairy products. For this reason, it is unrealistic to think that local urban agriculture is the end all be all for providing the solution to food insecurity.

1. Create a Clear and Comprehensive Plan. A comprehensive plan needs to be made that provides a clear, defined set of policies and zoning ordinances dedicated to urban agriculture, farming, and access to healthy food. It also identifies where each use is permitted and establishes regulations designed to minimize potential impacts on surrounding properties and helps to maintain the character of the community.
2. Create an Equity Atlas. Creating an Equity Atlas presents an opportunity to take a full assessment of issues and opportunities plaguing the region, specifically related to farming, agriculture and food access. Updating this plan every 5 to 10 years creates a benchmark that can be used to measure progress. Furthermore, creating a grading system that combines metrics can be tracked, providing an incentive to improve on a consistent basis.
3. Implement the Use of HIAs as Assessment Tools. Using Health Impact Assessments (HIA) can give insight on the overall health of the region. With this data, potential needs of the community can be provided after completing the surveying stage of the HIA. HIA's have a proven track record and can be used in a variety of different ways.
4. Encourage Public-Private Partnerships. A partnership can be formed with the State and a local, private organization to address the issues of access to healthy food. This framework has been successful for the Healthy Food Finance Initiative (HFFI) Partnership, especially in Philadelphia, and represents a framework that can be adopted in the region to provide funding and technical assistance.
5. Adopt the Fresh Program. Adopting a program similar to New York City's FRESH program provides the monetary support that many corner stores lack to renovate their stores and offer a way to change their grocery lines. Engaging partners such as the Home Depot, Turner Sports, Invest Atlanta, and Enterprise Community will be key to the viability of this program.
6. Incorporate Food Access in LIHTC Applications. Use Low Income Housing Tax Credit (LIHTC) applications as a way to encourage developers to include access to healthy food when building subsidized housing. Offering points for transit proximity to helps TOD and food projects score more competitively[8]. Coupling LIHTCs, the greatest source of funding at the state and regional level, can

incentivize the incorporation of food markets and food trucks, bodegas, and community gardens near transit.

7. Re-align Regional Landbanking to Assess Needs. Atlanta has both the Fulton County/City of Atlanta Land Bank Authority (FCCALBA) and the Atlanta Land Trust Collaborative (ALTC), which handle the chief amount of land banking in the region. One potential role of the land bank is to allow properties to be used in the interim as community or market gardens. Another role is to consolidate adjacent properties contingent upon their potential to be zoned as agriculture.

- Furthermore, the mission of the ALTC is to create affordable housing along the Beltline. Locating

Conclusion

affordable housing near fresh food markets or other examples of urban agriculture provides low to moderate income households access to fresh and healthy food.

8. Adopt More Strategies for Land Preservation. Another way to preserve land is to provide or create policies

that allow the use of the conservation easements to conserve land suitable for farming. Adopting these policies makes it possible to conserve land, but also protects corridors for wildlife.

9. Introduce the Farm to School Program. Including farming as an optional course in secondary schools in the region provides education on the nuances of farming at a young age. This assists in eliminating the temptation to purchase unhealthy foods that are advertised on TV, a serious issue in food swamps and low-income neighborhoods.

In conclusion, the Atlanta region has been progressive in promoting TOD as an essential component of development. Utilizing the benefits of TOD to incorporate access to healthy food can be achieved by taking a comprehensive approach. This process includes taking a snapshot of the region to provide a better understanding of equity issues. Creating a Metropolitan Atlanta Equity Atlas is key, because it provides insight about what resources are available in the region and what needs to be done to connect other communities with these resources.

The region should identify opportunities similar to those located around the H.E Holmes and King Memorial MARTA stations to provide direct access to healthy food via public transit. Examining the amount and suitability of the current housing inventory (vacant lots and properties) in the region is critical to planning the next steps to providing access to healthy food. One limitation of this analysis is that it does not include bus routes, which are a key component of public transit. For the purposes of this analysis, only looking at rail transit succeeds in identifying and classifying opportunities. Similar to the process performed in Cleveland, the use of vacant land property is essential in reversing the trend of disinvestment in impoverished neighborhoods. In Atlanta, the FCCALBA would perform the task, but would most likely need an increase in organizational capacity. Other changes that would need to made relate to policies and zoning ordinances.

Portland, Cleveland, and New York City have used changes to zoning and policies to provide solutions to a wide variety of problems. Cleveland addressed foreclosed and vacant housing, while Portland created proper zoning to regulate an urban agriculture movement. New York City ensured that residents of food deserts have access to healthy food above and beyond corner stores located in food swamps. Creating a resource book provides options for what can be done with vacant land and serves as a guide. It can include sources of funding, like those used in New York City, to put healthier food options on the shelves. It can also include specific ordinances that have worked in cities throughout the U.S. Other information included in the

Legacy at Stake: Several key events during the Civil Rights Movement took place on Edgewood and Auburn Avenue, located in the Martin Luther King Historic District in Atlanta, GA. This neighborhood contains the birth home of Martin Luther King, Jr. (left) and one of Atlanta's many food deserts.

guide is specifically related to economics, more specifically employment and ownership. Suggested items in the resource guide include details on the certification process, how to start and operate a market garden, and zoning ordinances that should be considered when adopting urban agriculture policies. Combining all of the takeaways from these three cities provides a wealth of information, that if utilized in Atlanta, circumvent barriers often experienced by stakeholders and local governments.

Dating back to the days of the Civil Rights Movement, Atlanta has been a leader for movements that affect the quality of life for its residents. This is a prime opportunity to empower the residents for the latest cause that is destroying our quality of life. It is important to stress how food access affects health, but other perspectives can interest different stakeholder groups. Other perspectives to consider include education, employment, and autonomy. It was not long ago that Civil Rights leaders used this angle to be provide alternatives for the underserved population of Blacks to prevail when the outlook was bleak. Steven Adlai said, "A hungry man is not free." The food insecurity crisis represents a pandemic that has crippled Atlanta similar to discrimination during the Civil Rights era. We, as a community, have the power to set free every man, woman, and child who is affected by food insecurity, but it will take a movement similar to the one spearheaded by Civil Rights leaders over a half-century ago.

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